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            IN THE UNITED STATES DISTRICT COURT
      SOUTHERN DISTRICT OF WEST VIRGINIA AT CHARLESTON
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    -----) Master File No.
 3
    IN RE: ETHICON, INC.,
                               ) 2:12-MD-02327
    PELVIC REPAIR SYSTEM
    PRODUCTS LIABILITY
                               ) MDL 2327
    LITIGATION
                               ) JOSEPH R. GOODWIN
                                ) U.S. DISTRICT JUDGE
 6
    THIS DOCUMENT RELATES TO
    ALL WAVE 4 AND SUBSEQUENT
    WAVE CASES AND
 8
    PLAINTIFFS:
   Sharon Bartley
    Case No. 2:12cv04270
10
    Gladys Thruman
    Case No. 2:12cv04930
11
12
    Sharon Kay Lunsford
    Case No. 2:12cv03308
13
    Bertha Towns
    Case No. 2:12cv03306
14
15 Peggy Connolly
    Case No. 2:12cv04026
16
17
18
               GENERAL EXPERT DEPOSITION OF
19
                  SARAH ABBIE COLLINS, M.D.
20
                  **TVT and TVT Exact**
21
                       March 6, 2017
22
                     Chicago, Illinois
23
24
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The TVT and TVT Exact get deposition of SARAH ABBIE CO the Plaintiffs for examination, the Federal Rules of Civil Process States District Courts pertaining depositions, taken before COR No. 84-1968, Registered Profest Certified Shorthand Reporter of Illinois, at the offices of Kirklar Suite 700, 300 North LaSalle States Tillinois, on March 6, 2017, communication of the process of the state of the process of the pr	DLLINS, M.D., called by taken pursuant to edure of the United g to the taking of INNE T. MARUT, C.S.R. ssional Reporter and a of the State of the State of the State, Chicago,	Table 1
1 APPEARANCES: 2 ON BEHALF OF THE PLAINTIFF: 3 AYLSTOCK, WITKIN, KREIS & OVE 17 East Main Street 4 Suite 200 Pensacola, Florida 32502 5 850-202-1010 BY: MARY LIU, ESQ. 6 mliu@awkolaw.com 7 8 9 ON BEHALF OF THE DEFENDANTS: 10 TROUTMAN SANDERS LLP Bank of America Plaza 11 600 Peachtree Street, N.E. Suite 5200 12 Atlanta, Georgia 30308-2216 404-885-2606 13 BY: ERIC RUMANEK, ESQ. eric.rumanek@troutmansander 14 15 16 17 18 19 REPORTED BY: CORINNE T. MARUT, 0 20 21 22 23 24	rs.com	1 (WHEREUPON, the witness was duly sworn.) 3 SARAH ABBIE COLLINS, M.D., 4 called as a witness herein, having been first duly sworn, was examined and testified as follows: 6 EXAMINATION 7 BY MS. LIU: 8 Q. Good morning, Dr. Collins. 9 A. Good morning. 10 Q. For the record can you please state your full name. 11 A. Sarah Abbie Collins. 12 Q. And what is your address for your place of practice? 13 Q. And what is your address for your place of practice? 14 Of practice? 15 A. 250 East Superior Street, Suite 52370, 16 Chicago, Illinois, 60611. 17 Q. Doctor, I am going to hand you real quickly the Notice for Deposition. 18 quickly the Notice for Deposition. 19 MS. LIU: Counsel. 20 (WHEREUPON, a certain document was marked Collins (General TVT/TVT Exact) Exhibit No. 1, Notice to Take Deposition of Sarah Collins,

Page 26 Page 28 It was during both. report that I did I got a little faster. So, like 1 A. 20 for two and then another... 2 Can you -- would you be able to decipher Maybe 30 hours, 30 to 35. between how many were done in residency and how 3 3 many were done during your fellowship? 4 BY MS. LIU: 4 5 5 A. Honestly, no. I don't think I could. Q. And, Doctor, you said that you served in 6 five of the cases, served a report in five of the 6 You know, in fellowship, we were doing a lot of 7 cases. Did you actually draft a report for the 7 transobturator and retropubic slings. Every 8 other two? 8 retropubic sling was the original TVT Retropubic 9 and I did -- I would say many more were from 9 A. The other four? Q. You mentioned you had seven. You were fellowship than were from residency. 10 10 In residency it's not uncommon for the asked to do seven. 11 11 12 A. Oh. The other two. I see. 12 attendings and fellows to not necessarily let the 13 No, I did not. I didn't actually look 13 resident pass the trocar. So, I probably did 10 to 14 at those reports at all. 20, but these are numbers that I'm kind of, you Q. So, you did a total of five reports, 15 know, just pulling out from, you know, my 15 case-specific reports? 16 recognition of the -- the way that training 16 17 normally goes. 17 A. Um-hmm. 18 MR, RUMANEK: Yes? 18 And in fellowship I probably did 80, and 19 I did many more than that of transobturator slings 19 BY THE WITNESS: 20 20 A. Yes. too. MS. LIU: Thank you. 21 Q. And, Doctor, just so you understand, I 21 22 don't need an exact number and I don't want you to 22 BY MS. LIU: 23 Q. Doctor, is this the first time you've 23 guess, but I am entitled to a fair estimate. 24 been asked by a medical device company to serve as 24 So, based on your recollection, if you Page 27 Page 29 an expert? can have a number that is a fair recollection of 1 2 A. 2 what you remember, then I would appreciate that. 3 So, you've never been asked by another 3 So, thank you very much. Now, you mentioned that in residency medical device company and turned them down, is 4 4 5 they didn't -- the attendings didn't let the 5 that correct? 6 A. That's correct. residents pass a trocar or do that portion of the 7 Doctor, I'm going to ask you right now 7 procedure. O. 8 In these 10 to 20 that you mentioned, 8 about your experience with the TVT Retropubic and 9 not the TVT Exact just yet. 9 were these the ones where you actually performed 10 A. Okay. 10 the procedure or were you just assisting the 11 Q. How many TVT Retropubics have you 11 attending? 12 implanted? 12 A. No, those have been ones where I 13 actually passed the trocars. 13 The TVT Retropubics that I implanted Q. In fellowship, the 80 were ones that you were all done during training and I can't give you 14 14 an exact number, but I would say about 100. actually passed the trocars as well? 15 15 16 Q. And when you said "training," I saw that 16 A. Yes. 17 on your background you were a fellow for a little 17 Thank you, Doctor. 0. 18 while and then you also had your residency. So, 18 Why have you not used the TVT Retropubic 19 when was this training, the TVT Retropubic 19 since fellowship? 20 Mainly because I used the TVT Exact when 20 training? I became an attending. It became readily 21 A. That would have been between 2003 and 21 22 2011. 22 available. It was the sling that my group was 23 using and I found that I liked it a lot. 23 O. Was it during one of your -- was it 24 during your residency or your fellowship? 24 Q. You liked it better than you liked the

	Page 30		Page 32
1	TVT Retropubic?	1	Q. Based on your CV, you joined this group
2	MR. RUMANEK: Object to form.	2	in June 2016, correct?
3	BY THE WITNESS:	3	A. Correct.
4	 A. No. I didn't necessarily like it 	4	 Q. So, prior to that, you were with the
5	better, but I certainly found that I could use it	5	University of Chicago?
6	well and accomplish the same operation using the	6	A. Correct.
7	TVT Exact.	7	Q. In their Ob-Gyn practice?
8	So, sometimes it just makes sense to,	8	A. Correct.
9	you know, conform to the, you know, the what the	9	 Q. Were you also working in female pelvic
10	group is doing in terms of, you know, our stock of	10	medicine and reconstructive surgery with University
11	the sling and what we have. We can only buy one.	11	of Chicago?
12	So, to me it made perfect sense to use the	12	A. Yes. The practice was called gynecology
13	TVT Exact.	13	and reconstructive pelvic surgery, but it was
14	Q. Doctor, you mentioned since you	14	FPMRS.
15	mentioned your group, let me go ahead and switch	15	Q. That was from August 2011 to May 2016,
16	gears a little bit.	16	is that correct?
17	I am handing you what I have marked as	17	A. Correct.
18	Exhibit 3.	18	Q. When did you finish your fellowship?
19	(WHEREUPON, a certain document was	19	A. In the end of June 2011.
20	marked Collins (General TVT/TVT	20	Q. And then you moved to Chicago from that
21	Exact) Exhibit No. 3, Curriculum	21	point forward, is that correct?
22	Vitae.)	22	A. Correct.
23	THE WITNESS: Do you want this back?	23	Q. Now, when you mentioned the group used
24	MS. LIU: Yes. Let's go ahead and put this	24	TVT Exact, are you talking about the University of
iii Soski	Page 31	0011	Page 33
1	back here.	1	Chicago?
2	back here. MR. RUMANEK: Do you need the Notice anymore?	2	Chicago? A. Yes.
2	back here. MR. RUMANEK: Do you need the Notice anymore? MS. LIU: No.	2	Chicago? A. Yes. Q. Now, since you've joined Northwestern
2 3 4	back here. MR. RUMANEK: Do you need the Notice anymore? MS. LIU: No. MR. RUMANEK: Let's keep it stacked for the	2 3 4	Chicago? A. Yes. Q. Now, since you've joined Northwestern does your current group also use TVT Exact?
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2 3 4	back here. MR. RUMANEK: Do you need the Notice anymore? MS. LIU: No. MR. RUMANEK: Let's keep it stacked for the Court Reporter. BY MS. LIU:	2 3 4 5 6	Chicago? A. Yes. Q. Now, since you've joined Northwestern does your current group also use TVT Exact? A. No. We use the Boston Scientific Advantage Fit.
2 3 4 5	back here. MR. RUMANEK: Do you need the Notice anymore? MS. LIU: No. MR. RUMANEK: Let's keep it stacked for the Court Reporter. BY MS. LIU: Q. Doctor, I have handed to you what I have	2 3 4 5 6 7	Chicago? A. Yes. Q. Now, since you've joined Northwestern does your current group also use TVT Exact? A. No. We use the Boston Scientific Advantage Fit. Q. And, Doctor, is that what you are
2 3 4 5 6	back here. MR. RUMANEK: Do you need the Notice anymore? MS. LIU: No. MR. RUMANEK: Let's keep it stacked for the Court Reporter. BY MS. LIU: Q. Doctor, I have handed to you what I have marked as Exhibit 3. Do you recognize that	2 3 4 5 6 7 8	Chicago? A. Yes. Q. Now, since you've joined Northwestern does your current group also use TVT Exact? A. No. We use the Boston Scientific Advantage Fit. Q. And, Doctor, is that what you are currently using, the Advantage Fit?
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	back here. MR. RUMANEK: Do you need the Notice anymore? MS. LIU: No. MR. RUMANEK: Let's keep it stacked for the Court Reporter. BY MS. LIU: Q. Doctor, I have handed to you what I have marked as Exhibit 3. Do you recognize that document? A. Yes. Q. It's your CV, is that correct? A. Yes. Q. Doctor, you mentioned your group. What is the group that you are currently with? A. I'm with Northwestern Medicine at this time. Q. And is it a specific urogynecology group that you're with? A. Yes. Q. Can you explain how that works? A. I am part of a university-based female	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Chicago? A. Yes. Q. Now, since you've joined Northwestern does your current group also use TVT Exact? A. No. We use the Boston Scientific Advantage Fit. Q. And, Doctor, is that what you are currently using, the Advantage Fit? A. Yes. Q. Since June of 2016? A. Yes. Q. Who makes that decision in your group? A. It's a decision made between our division director and operative OR purchasing. Typically the vendors have package deals with the hospital and, you know, certainly the clinicians have input about which devices get purchased and used regularly. But, yeah, that decision had actually already been made when I joined the group. Q. Have you made any suggestions to switch to TVT or TVT Exact?
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Page 38 Page 40 passed from the paraurethral dissection to the 1 rep. 2 2 medial thigh. Q. Do you remember any Ethicon reps? 3 3 Q. And, Doctor, can you estimate the number A. 4 of TOT approaches versus retropubic approaches that 4 And, Doctor, how many -- let me break 5 5 you have performed personally? this down actually. 6 A. I'd say if you were to tally it up right 6 How many slings have you implanted since now, maybe half and half in my -- well, actually, I 7 you've joined the practice at Northwestern? 7 might correct that and say I've done more 8 A. I don't know. Maybe -- I've been there 8 9 9 retropubics at this point. less than a year. Sort of getting ramped up now volume-wise. I would say 50. 10 In my fellowship we did more 10 11 transobturators. But pretty soon after my 11 So, you implant around 50 slings at 12 fellowship, when I became an attending, I started 12 Northwestern. What about during your time at to do more retropubics and now I almost exclusively 13 University of Chicago? 13 A. A lot more. Maybe 200. 14 do retropubics. 14 15 Q. And why is that? 15 And then what about during your Q. A. Some of the longer term data comparing 16 16 fellowship? retropubic and transobturator slings indicate that 17 A. I think I already gave you that number. 17 Total between all of your slings. the retropubic slings may be more effective. 18 18 0. Q. So, you've -- you've determined that you 19 Oh. Well, I think I told you about 80 19 retropubics and I would say for the Monarcs maybe 20 want to do the retropubic approach over the 20 21 transobturator approach, is that correct? 21 250. So, maybe 300, what is that, 330, something 22 A. Most of the time. Not exclusively, but 22 like that. MR. RUMANEK: Don't ask a lawyer to do math. 23 most of the time. 23 24 24 Q. What percentage currently? MS. LIU: That part is so true. Page 39 Page 41 BY MS. LIU: I would say 95% retropubic. 1 1 2 Q. And when you currently do do the 2 Q. What about during your residency, you 3 said residency wasn't that many, is that correct? 3 transobturator approach, do you still use the 4 A. No, I would say 30 absolute max but 4 Monarc sling? 5 5 somewhere between 10 and 30 for all in. A. The Monarc sling is no longer available. Q. So, in doing this math, we're looking at 6 Which sling do you use now? 6 Q. maybe around 600 total slings implanted during your A. You know what? I can't remember the 7 7 career, is that correct? name of it, which sounds ridiculous. I think it 8 8 9 might be -- I think it's the Obtryx. I can A. Probably. describe the device to you perfectly but I --10 MR. RUMANEK: Just so it's clear, you're 10 Q. Is it a Boston Scientific product? referencing polypropylene slings, correct? 11 11 12 MS. LIU: Correct. 12 Yeah. I think so. A. BY MS. LIU: 13 At your current practice are they using 13 14 14 Boston Scientific exclusively? Q. Is that --15 I don't know. 15 Yeah. A. 16 -- what you're -- Q. Doctor, in your career as a surgeon have Q. 16 17 you been visited by sales reps? 17 A. 18 The numbers that you gave me were 18 A. Yes. Q. Sales reps for Ethicon? 19 polypropylene slings? 19 20 A. I don't know. Maybe very early on in 20 Yes. A. my -- maybe in my residency. It's hard to say. By 21 So, 600 polypropylene slings during your 21 career. Have you followed every single one of your the time I was in fellowship, TVT was so well 22 22 incorporated into our practice that I don't know 23 patients that you've implanted a sling in? 23 24 A. I mean, I have seen all of my that there would have been a role for an Ethicon

Page 60 Page 58 up of anywhere from two to four people and they're meetings about monthly. 1 supposed to -- typically there's a lead writer, not 2 2 O. And what committee are you with him on? 3 A. I'm on the Clinical Guidelines Committee always but typically, and then the next step is that outlines are created for what's going to be 4 of the American Urogynecologic Society. 4 5 Is that AUGS? included in the document along with a review of the 6 6 literature. Yeah. A. 7 And what does this Clinical Guidelines 7 Then once the group approves the Q. 8 8 outlines and, you know, feels that the outline will Committee do? 9 We usually under the direction of the 9 satisfy the breadth of what we're being asked to do, writing happens and then usually have about, I 10 Board of the American Urogynecologic Society draft 10 documents under certain clinical headings that we don't know, four to six weeks to do the writing, 11 11 12 maybe even more, and then we submit the document to feel need such a document, and essentially we 12 13 review the evidence extensively and produce usually 13 the whole group. The whole group reviews it. Changes are 14 14 an expert opinion level document on a certain made based on the group's feedback. And then there 15 topic. It will be evidence-based, but it wouldn't 15 fit criteria for like a meta-analysis, for example. 16 are readers then that actually handle the document Q. So, it would not be a peer-reviewed 17 outside of the group, and those are on the 17 Terminology Committee. document, is that correct? 18 18 19 We have a separate Terminology Committee 19 A. Well, no. 20 of AUGS, and I'm actually a liaison to that MR. RUMANEK: Object to form. 20 21 BY THE WITNESS: 21 committee from the Clinical Guidelines Committee. 22 So, we'll review the document through 22 A. Okay. No, that's not correct. They are peer-reviewed and typically do get published. I 23 that committee, make sure that the terminology used 23 in the document is consistent, and then at some 24 only mean to say that they're not meta-analyses, Page 59 Page 61 which is a different type of -point after that we will release the document to the Board members and to ultimately the membership 2 BY MS. LIU: 2 Q. Can you explain what that means? 3 3 at large of AUGS. 4 A. A meta-analysis is a very rigorous 4 So, we get feedback from a lot of 5 different people and then we finalize the document 5 evaluation of multiple pieces of evidence, usually multiple articles addressing the same problem. 6 and publish it. 6 There is a combination of the data that is done 7 Q. Now, when you -- when you talked about 7 8 the topics, who decides on the topics? 8 through a very rigorous analytic process that 9 A. Like I said, a lot of times the Board of 9 requires some extensive knowledge in specifically performing meta-analyses. 10 the American Urogynecologic Society. Anyone can 10 raise a topic that they think might be of interest. Q. Doctor, how many people are in this 11 11 And then usually before we put a lot of man-hours 12 Clinical Guidelines Committee? 12 into it, we will discuss it with the Board and make 13 Probably about a dozen. 13 sure that we feel there is a broad enough audience 14 Q. And prior to any documents being 14 15 published, what process does it go through? 15 for it. MR. RUMANEK: Object to the form. 16 Q. And how many people are on the Board? 16 17 BY THE WITNESS: 17 A. I don't know actually. 18 Q. So, these topics that are brought in 18 A. Well, we decide on a topic as a group. your monthly meetings, they're topics that are 19 Dr. Tulikangas who is the chair of the group will 19 be leading our meetings and we form writing groups. 20 given to you guys by the Board, is that what I'm 20 21 So, people will either request to be on a 21 understanding? 22 MR. RUMANEK: Object to the form; 22 particular writing group or be asked to be on the

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mischaracterizes the testimony.

BY THE WITNESS:

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writing group.

Typically the writing group will be made

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A. Like I said, sometimes. But like I said 2 also, anybody who has a good idea can raise that. BY MS. LIU:

Q. And then ultimately who decides on what topics each of these writing groups work on?

A. Well, if we've decided as a group to take on a document, then it's usually, you know, a conference call that we'll be having and Dr. Tulikangas will say, "Who wants to participate in this?" A few people will step up.

O. So, who ultimately decides -- strike that.

Does your group of 12 people decide on a 14 topic or topics to write on?

A. I feel like I've answered this already. 16 But essentially, I mean, sometimes Paul Tulikangas will say, "The Board has mentioned that they would like a document on X" or "I had a conversation with 18 a colleague the other day and they mentioned it would be nice to have a document on Y." Anyone in 20 21 the group could say that.

Q. And do you -- when somebody mentions, "Okay, somebody would like a topic on this" or "a topic on that," is that the time where you guys

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systematic review. We think we could offer XYZ." 2 And the group decides.

O. Is it a vote?

4 Yeah, more or less. Usually we don't 5 even have to do like a formal vote. It's more like a -- there is a tone. 6

Q. So, it's more of you guys have a discussion and ultimately decide to do it without a vote?

MR. RUMANEK: Object to the form.

11 BY THE WITNESS:

 Well, I mean, when you have 12 people, it's usually pretty obvious whether everybody 14 agrees or not and it rarely comes down to six -- I don't think it's ever happened that six people want

it and six people don't. So, a vote is just not 16 17 really necessary.

18 BY MS. LIU:

19 Q. Is it usually unanimous when you guys 20 decide --

21 A. Yeah.

-- to do a project?

23 MR. RUMANEK: I note that we have been going 24 over an hour. I don't know if this is a good spot.

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decide, yes, we are going to do it?

A. Yes.

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Or how does that process work is what I am asking. How does the process from the time somebody mentions, "Hey, this would be a great topic" to ultimately deciding to work on that topic?

A. I mean, we have these meetings monthly. Typically the ideas come from some conversation in the last month that people have had because we do it every call. So, I would say it takes about a 11 month to decide.

But it could be something like, you know, "Hey, we, you know -- I was speaking with somebody on the Board. They'd love to have a document on the efficacy of the anterior repair, native tissue anterior repair. What do you guys 18 think?"

And we'd say, "Well, there is already a 20 systematic review on that, like XYZ. I don't know 21 if there is a role for that kind of document in the 22 literature at this point," one person may say.

And the other would say, "Well, you 24 know, a couple new things have come out since X MS. LIU: Let's take a break.

(WHEREUPON, a recess was had from 10:10 to 10:20 a.m.)

BY MS. LIU:

5 Q. Doctor, we were just talking about the committee that you serve on with AUGS.

8 O. And you had mentioned that 9 Dr. Tulikangas is the chair of that committee. Do 10 you know how long he's been the chair?

A. I think he's been the chair for over a 11 12 vear.

13 Q. And has he been on that committee prior to being a chair? 14

I don't know that.

16 Q. And he was your fellowship director?

Correct.

17 Q. And so how -- what was the relationship 18 19 between a fellow and the fellowship director at the program that you were at? 20

A. The fellowship director is often a mentor to the fellows that are going through at that time. Usually the fellowship director has a bit of a stronger relationship with the fellows

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Page 120 Page 118 would be done for stress incontinence. Again, the surgery to place a TVT can 1 cause that complication, but the TVT itself cannot. 2 2 BY MS. LIU: Q. And, Doctor, did you review the IFUs 3 BY MS. LIU: 3 4 Q. Do you agree that patients being placed 4 besides the 2015 one for this report? 5 A. I reviewed one other version, but I with TVT have the risk of having multiple revision 5 6 6 can't tell you specifically which one or whether it surgeries? 7 was TVT or TVT Exact that I read that. 7 A. There is a small risk that patients will 8 Q. So, you read two IFUs in preparing your 8 require a revision surgery after any surgery for 9 9 stress urinary incontinence, yes. report, is that correct? 10 Q. Now, Doctor, in your report, you had 10 A. Yes. talked about the risks of the 2015 IFU, is that And the two IFUs that you read, you 11 11 don't -- besides the 2015, you don't know which 12 correct? 12 13 other one that you read, is that correct? 13 That is correct. 14 Q. And, Doctor, you haven't used the TVT A. Correct, but I think it was an earlier 14 since 2011, is that correct? 15 version. 15 16 The TVT Retropubic. 16 Q. Do you know how far back? Α. 17 17 Q. Yes. Α. No. 18 I've just used the TVT Exact, that's 18 Q. Now, do you know why the earlier A. versions would not include all of the complications 19 correct. 19 that are listed in the 2015 IFU? 20 Q. Correct. So, and when you talked about 20 21 the 2015 IFU, were you talking about the 21 MR. RUMANEK: Object to the form. TVT Retropubic or the TVT Exact? 22 BY THE WITNESS: 22 A. You know, other than sort of, you know, 23 MR. RUMANEK: Object to the form. 23 trying to be more proactively defensive, no. 24 BY THE WITNESS: 24 Page 121 Page 119 I would have been referring to both of 1 BY MS. LIU: 1 2 2 Q. And do you believe that all risks should them. 3 3 BY MS. LIU: be in an IFU? 4 Q. And do you agree that all the things 4 MR. RUMANEK: Object to the form. 5 that I just listed that some of which you agreed 5 BY THE WITNESS: and some of which that you did not agree with are 6 I think it's irrelevant whether all 6 7 7 risks are in the IFU. in the 2015 IFU? 8 8 Do I believe --BY MS. LIU: Α. MR. RUMANEK: Object to the form. 9 9 So, you don't believe that all risks 10 BY THE WITNESS: 10 should be in an IFU? MR. RUMANEK: Object to the form. 11 A. -- that all of the complications that 11 12 you listed are in the -- I think that the IFU 12 BY THE WITNESS: refers to the body of possible complications that 13 I think that's correct, yes. any surgeon trained in anti-incontinence surgery 14 BY MS. LIU: 14 15 would know already. 15 Q. Now, Doctor, have you ever designed a medical device? 16 BY MS. LIU: 16 17 Q. So, you don't believe that what's in the 17 I've never designed a medical device. 18 IFU is specific to the TVT? 18 Q. Have you ever drafted an IFU? MR. RUMANEK: Object to form. 19 A. I have not. 19 Q. Do you understand the regulations that 20 BY THE WITNESS: 20 21 A. I think that a lot of it as it relates 21 are involved in drafting an IFU? MR. RUMANEK: Object to the form. 22 to the type of mesh, you know, the Type 1 22 polypropylene, is specific to the TVT but much of 23 BY THE WITNESS: 23 24

A. I am very vaguely aware of them but...

24 it is actually just referring to any surgery that

1 BY MS. LIU: 2 Q. So, you don't know as far as the 3 regulations are concerned what needs to be in an 4 IFU, is that correct? 5 MR. RUMANEK: Object to the form. 6 BY THE WITNESS: 7 A. That's correct. I approach an IFU as a 8 clinician and a surgeon. 9 BY MS. LIU: 9 Q. But not as somebody who would understand 11 the regulatory restrictions or regulatory 12 requirements of an IFU, is that correct? 13 MR. RUMANEK: Object to the form. 14 BY THE WITNESS: 15 A. Probably, although I think the IFU is 16 written for me as a surgeon. I think that I'm the 17 target audience and so insofar as the, you know, regulatory bodies would think should go in an 18 IFU. If it doesn't necessarily matter what, you 19 know, regulatory bodies would think should go in an 10 IFU. If it doesn't help me, I don't know that it's 11 relevant. 12 BY MS. LIU: 13 Q. So, you haven't been consulted by a medical device company as to what should go in from a clinician's perspective into an IFU, have you? 4 A. No. 5 Q. And as far as designing a medical device, you testified that you have not, is that correct? 8 A. That's correct. 9 Q. Have you ever participated in designing a mesh product? 1 A. No. 1 Q. Have you ever been approached by a company to help with designing a mesh product? 1 A. No. 2 Q. Have you ever been approached by a company to help with designing a mesh product? 1 A. No. 1 Q. So, Doctor, you are not a biomaterials engineer, are you? 1 MR. RUMANEK: Object to the form. 1 BY THE WITNESS: 1 A. That's correct. 9 Q. Have you ever been approached by a company to help with designing a mesh product? 1 A. No. 1 Q. So, Doctor, you are not a biomaterials engineer, are you? 2 A. I am not an engineer. 3 BY THE WITNESS: 4 A. That's correct. 9 Q. Have you ever been approached by a company to help with designing a mesh product? 1 A. No. 1 Q. So, Doctor, you are not a biomaterials engineer, are you? 2 A. I am not an engineer. 3 BY THE WITNESS: 4 BY THE WITNESS: 4 BY THE WITNESS: 5 A. That's correct. 9 Q. Have you ever been approached by a company to he				10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -
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1 the medical device company should follow those 2 regulations? 1 A. I think it's factual that I am not a 2 biomechanical engineer. 3 MR. RUMANEK: Object to the form, grossly 3 BY MS. LIU:		Page 123		Page 125
2 regulations? 2 biomechanical engineer. 3 MR. RUMANEK: Object to the form, grossly 3 BY MS. LIU:	1		1	20 00000 00 00 00 000 000 000 0000 000
3 MR. RUMANEK: Object to the form, grossly 3 BY MS. LIU:		25 25 150 150 150 150 150 150 150 150 150 15	2	
			550	
5 BY THE WITNESS: 5 mesh products, is that correct?				
6 A. I mean, I think that the device company 6 MR. RUMANEK: Object to the form of the	37563		- 88	
7 better follow the rules so that it doesn't get in 7 question.			124	
8 trouble. But as it relates to my practice, it 8 BY THE WITNESS:			- D	48. # 36. 44. 45. 45. 45. 45. 45. 45. 45. 45. 45
9 wouldn't make a difference. 9 A. I would say as it relates to			6000	
		CONTROL CONTROL OF THE CONTROL OF TH	1885 BB1	urogynecology, I'm an expert in the mesh products
11 Q. But you don't have any experience 11 that are used for urogynecology.		10 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
12 yourself in drafting an IFU? 12 BY MS. LIU:				
13 A. That's correct. 13 Q. But you're not an expert in actually				
		사이지를 기계하여 있다면 보다 되었다면 되었다.		designing the weave of the mesh, is that correct?
15 expert when it comes to drafting an IFU? 15 MR. RUMANEK: Object to the form.		[18] [18] [18] [18] [18] [18] [18] [18]	200.000	
16 MR. RUMANEK: Object to the form. 16 BY THE WITNESS:		· CASS - PROBLEM 등 PROBLEM (SECTION SECTION SEC	1000000	
17 BY THE WITNESS: 17 A. That's correct.				
18 A. To drafting an IFU? 18 BY MS. LIU:		The control of the co		
19 BY MS. LIU: 19 Q. Are you an expert when it comes to				
20 Q. Correct. 20 developing the weight of the mesh?				
21 A. No, I would not. 21 MR. RUMANEK: Object to the form.				
22 Q. Have you ever provided any input in 22 BY THE WITNESS:				· = 0
23 drafting an IFU? 23 A. I am not an expert in developing the				
24 A. I have not. 24 weight of the mesh.				

Page 126 BY MS. LIU: familiar with? I know you mentioned the Gynemesh. 1 2 You mentioned the midurethral slings. You've also O. What about in determining the pore size, are you an expert in determining the pore size of mentioned the IntePro Y mesh. Are you familiar 3 4 with any other mesh products? 4 the mesh? 5 MR. RUMANEK: Object to the form. 5 MR. RUMANEK: Object to the form. She's testified about a lot of other products other than 6 6 BY THE WITNESS: 7 A. No. 7 just those ones that you just mentioned and she 8 BY MS. LIU: 8 also mentioned that she had used a lot of other 9 9 products that she couldn't specifically remember. Q. Do you know what the optimal pore size 10 should be in a sling? 10 BY MS. LIU: MR. RUMANEK: Object to the form. 11 Q. Doctor, you've testified that you've 11 used multiple different products. I understand 12 12 BY THE WITNESS: that. I'm taking -- I'm putting slings in one 13 A. Yes. 14 14 bucket right now. BY MS. LIU: 15 Q. And how do you know that? 15 The other sacral colpopexy meshes that A. Well, there have been multiple studies 16 you have used, which ones are you most familiar 16 comparing different materials used for midurethral 17 with? Which ones are you familiar with at all 17 18 slings and over the years we've attained a lot of 18 actually? 19 good data from the hernia literature as well and we 19 MR. RUMANEK: Object to the form. know that tissue ingrowth is maximized when the 20 BY THE WITNESS: 20 21 pores are over 75 microns and when the mesh is 21 A. Well, the Gynemesh initial sheets that 22 monofilamentous and that is an Amid Type 1 mesh. 22 we used to cut into Ys, the IntePro Y mesh, Alyte. Q. So, you're basing this on the Amid And then what we're using now is the Boston 23 23 24 Scientific mesh, and I can't remember the brand 24 study, is that correct? Page 127 Page 129 MR. RUMANEK: Object to the form. name of it. I would say I'm most familiar right 1 2 BY THE WITNESS: now with that one because it's what I use on a 3 regular basis. 3 A. Well, the Amid study is one, but there 4 are actually a lot of studies that have included, 4 Q. And, Doctor, have you or do you know of you know, slings that have been made of other 5 any studies that compare the pore size of these 5 materials as well and we know the outcomes of some 6 types of pelvic organ prolapse meshes compared with 6 7 the midurethral sling of the TVT? of the meshes that were used before the Amid 7 8 MR. RUMANEK: Object to the form. 8 Type 1s. 9 9 BY MS. LIU: BY THE WITNESS: Q. So, now --10 A. I don't know of any studies specifically 10 comparing a sacral colpopexy mesh to a TVT mesh. A. And now we know --11 11 12 BY MS. LIU: 12 Q. Sorry. 13 Sorry. And now we know, we have a lot 13 Q. And, so, you would not be able to say 14 of data from the Amid Type 1s as well. 14 whether the pore size of, say, the BSC mesh that 15 Q. So, now, Doctor, have you compared the 15 you're using compared with the pore size of the TVT 16 slings that have been available during your career, 16 as far as safety goes in a midurethral sling, is 17 that correct? 17 the pore size of that, compared with other types of

33 (Pages 126 to 129)

MR. RUMANEK: Object to the form of the

A. No, that's not correct. Both of them

are Amid Type 1 meshes with large pore size and

both are monofilamentous. Beyond that, I think

that there isn't much more that matters to me.

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21 22

23 24 question.

BY THE WITNESS:

18 mesh, say, the Ultrapro, as far as pore size goes

MR. RUMANEK: Object to the form.

A. I don't know what an Ultrapro is.

Q. Okay. Doctor, what meshes are you

19 for the safety of a sling?

21 BY THE WITNESS:

23 BY MS. LIU:

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Page 130 Q. So, say, for example, the pore size of 1 the TVT is slightly over 1,000 microns, is that 2 correct? That's what you have in your report? 3 4 MR. RUMANEK: Object to the form. 5 BY THE WITNESS: 6 A. That is correct. 7 BY MS. LIU: 8 Q. So, that's approximately 1 millimeter, 9 is that correct? A. Um-hmm. 10 MR. RUMANEK: Object to the form. 11 12 BY MS. LIU: 13 Q. Now -- can you say yes or no? 14 A. Yes. 15 Q. Okay. So, do you know how that 16 1 millimeter is measured? 17 Like with a ruler, is that what you're A. 18 asking? Q. Sorry. No. Do you know like as far as 19 20 the pore size goes where the measurement is taken? A. My understanding is from one aspect of 21 22 the repeated pattern to the beginning of the next. 23 So --24 Q. What shape is the pore in a TVT mesh?

Page 132 Okay. And, Doctor, have you read in any literature or any kind of internal documents that state, you know, pore size is between, say, 2 and 4 millimeters would be safer than the 1 millimeter pore size of the TVT?

MR. RUMANEK: Object to the form. BY THE WITNESS:

8 A. I have not. I have -- I know that there 9 are some ultra-lightweight prolapse meshes that have pore sizes of that caliber. But in terms of 10 11 projecting that on to whether or not the TVT would 12 be a safer device if it had that size of pores, I would say I've never heard that before or read that 13 before and I can't imagine that that's true. 14 BY MS. LIU: 15

16 Q. And when you say you can't imagine that 17 that's true, is that just based on speculation? MR. RUMANEK: Object to the form. 18

BY THE WITNESS: 19 20 No, I think when you're talking about the efficacy of a midurethral sling, my sense of 21 22 what's required of the material is based on my experience of having placed these and then taking 23 24 care of patients who have them implanted.

Page 131

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A. I don't know the exact shape of it. 1 Like I said, I haven't looked at it underneath a microscope to know whether it's round or orthogonal 3 4 or... 5

Q. And --

MR. RUMANEK: We have been going now over two hours. I don't know when a good stopping point is.

MS. LIU: Sure. We can do a stop.

(WHEREUPON, a recess was had from 11:22 to 11:33 a.m.)

11 BY MS. LIU:

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Q. Doctor, last we were talking about the 12 pore size of the TVT sling. 13

A. Yes.

15 Q. And I believe we were talking about how 16 it's measured from point A to point B. You 17 mentioned you didn't know whether or not it was a

18 circular type of measurement. Do you know how it

19 was measured?

A. I really don't. I've never read about 20 21 that particular aspect of measuring pore size.

Q. And --

A. I was assuming it was the actual pore 23 24 size but, you know, the dimension of the hole.

And I have used the ultra-lightweight 1 meshes in sacral colpopexy before and have found

them to be prohibitively flimsy. They've torn during handling in the operating room and that 4

concerns me with respect to function.

Obviously you don't want to place any material into a patient if it's not going to help them.

And I believe that a really large pore size would probably not be able to accomplish the task of creating a good supportive scaffold for the urethra at the midpoint the way the midurethral sling is supposed to.

Q. And have you tested that theory?

A. I feel like my clinical experience 15 16 satisfies my curiosity about that, but I've never conducted an experiment. 17

I have handled ultra-lightweight meshes at the time of sacral colpopexy and have found them to be frustratingly flimsy.

21 Q. Doctor, have you heard of a product or a 22 mesh called Pronova?

23 A. No.

Q. Have you -- sorry. Strike that.

Page 133

Page 138 Page 140 Do you see that? Up top on to the left 1 of the device. 1 2 2 Q. So, if the biomaterial engineers who corner. 3 3 designed the product tested the product or later on Yes. Α. 4 Okay. Do you see that there are several 4 developed or later on -- strike that -- or later on Q. 5 pages of internal documents that are listed on your gathered information that related to the safety of 6 reliance list? 6 its product, you wouldn't find that that would be 7 relevant to your analysis? 7 A. Yes. 8 MR. RUMANEK: Object to the form. 8 Q. But you didn't actually rely on them, is 9 BY THE WITNESS: 9 that correct? 10 A. I think it might be relevant but not 10 A. That's correct. 11 Did you rely on the two or the three 11 necessary because I have so much other data that, Ο. 12 you know, comes from the peer-reviewed body of that you reviewed in generating your report? 12 literature. I just can't imagine that that one 13 A. Well, like I said, I read them after I 13 generated the report. So, no. 14 memo would change what I already know based on a 14 systematic review type level evidence. 15 Q. So, you didn't rely on any internal 15 16 documents in generating your report? 16 BY MS. LIU: 17 A. No, I didn't think they were relevant to 17 Q. So, you're basically saying that in 18 any -- even if you had the entire body of internal 18 what I was writing. documents, you wouldn't consider them in generating 19 Q. Were they provided to you prior to 19 20 your report, is that correct? 20 generating your report? MR. RUMANEK: Object to the form. 21 A. I mean, I -- I bet I had -- I bet they 21 22 were included in some of the materials that Butler 22 BY THE WITNESS: 23 Snow sent me. They're just not helpful to what 23 A. If I had -- I can't say that. I mean, I 24 didn't read them all, you know. If there's a 24 I -- what I was writing. Page 139 Page 141 specific document you're referring to, I could look So, you didn't review them prior to 1 2 at that. 2 writing your report? 3 3 A. Correct. But I, you know -- I kind of hold the Now, do you know how Butler Snow 4 4 literature that I base my opinions on to a pretty 5 5 high standard and that's peer review and scientific determined the internal documents to send to you? 6 A. No. 6 rigor, and I had that in the documents that were 7 7 And you said you did not feel that they available to me that I'm already familiar with and were relevant. If you hadn't reviewed them, how 8 I relied on those. 8 9 9 Q. But you did not consider or rely on any come you didn't feel that they were relevant? 10 MR. RUMANEK: Object to the form. 10 internal documents in generating your general TVT and TVT Exact report, is that correct? BY THE WITNESS: 11 11 12 A. That's correct. 12 A. Well, you know, in -- I was charged with 13 MR. RUMANEK: Object to form. 13 creating a document that talked about my opinions 14 related to the safety and efficacy of the TVT 14 BY MS. LIU: 15 especially as it compares to its alternatives. 15 Q. So, if internally Ethicon felt that 16 And I don't think that -- I mean, I 16 there was a better mesh than the TVT mesh for the 17 think that the really robust scientific literature 17 midurethral retropubic sling and felt that -sorry. Strike that. about these devices is almost overwhelming in 18 18

36 (Pages 138 to 141)

If internally there were documents that

engineers had believed there was a better mesh out

there over the TVT, you would not have considered

MR. RUMANEK: Object to the form. She's

show that Ethicon had believed, their material

that information, is that correct?

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quantity. I had my hands full with that and that I

are saving to each other about that device is not

helpful in my opinion about the safety and efficacy

What different members of a corporation

20 do think is relevant to the safety and efficacy of

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the device.

Page 152 Page 150 generating your report, how did you choose which BY MS. LIU: 1 pieces of literature to cite to? 2 2 Over the course of your 14 years. A. I'd say I've read about half of this. 3 3 A. I selected the best quality study that I 4 4 Q. And did you rely on any of this felt best supported the point that I was trying to 5 material, the ones that you have read, in 5 make. 6 generating your report? 6 And, so, you specifically chose Q. 7 7 literature that supported your viewpoint, is that A. Yes. 8 8 Q. But not all of the materials in here, is 9 9 MR. RUMANEK: Object to the form. that correct? 10 Right, yes. 10 BY THE WITNESS: Now, Doctor, you mentioned that you rely Well, I mean, I think it only makes 11 11 12 12 sense that if you're trying to make a point, that on medical literature in generating your report. And that's basically what you relied on, is that you don't just state the point, that you actually 13 14 provide literature that that's true. correct? 14 15 A. Yes. 15 And sometimes I would provide, you know, 16 MR. RUMANEK: Object to the form. 16 references to literature that posited the opposite of the point that I was trying to make and then 17 BY MS. LIU: 17 18 another reference that would disprove that. Q. And in generating your report based on 18 that medical literature, what -- how do you usually 19 BY MS. LIU: 19 get your literature? 20 Q. So, as far as the literature that was 20 21 A. Lots of different ways. I receive 21 opposite of your viewpoint, what kind of weight did 22 22 certain journals or the table of contents of you give it? 23 23 MR. RUMANEK: Object to the form. certain journals every month, so I know what's 24 BY THE WITNESS: being published, in the Green Journal, the Gray Page 151 Page 153 Journal, the Gold Journal, International A. What do you mean? 1 2 Urogynecology Journal. 2 BY MS. LIU: 3 Q. So, you mentioned just now that you 3 And then twice a year there are national 4 conferences that I attend that, you know, highlight 4 would cite to literature that supported your 5 viewpoint and then you also sometimes would cite to 5 a lot of new developments and kind of let you know 6 what's going to be coming down the pike in the 6 literature that was opposite of your viewpoint and literature because a lot of the articles start as 7 then after that you would cite to literature that 7 8 disproves the literature that was opposite your 8 research projects that get presented at national 9 9 conferences. viewpoint. 10 10 So, my question is: In that literature And then, you know, I work with people that you reviewed that was opposite your viewpoint, 11 in my field who talk about articles that they've 11 how did you determine whether or not it was a read and we send articles to each other frequently 12 12 relevant study for you? 13 and... 13 14 Q. In generating your report did you read 14 MR. RUMANEK: Object to the form. 15 all the literature that Ethicon sent to you? 15 BY THE WITNESS: 16 A. Well, I mean, scientific discovery is a 16 A. linear process and these articles were published 17 Do you know how Ethicon generated its 17 Q. along the course of that linear process. So, you 18 18 literature list to send to you? know, what was published in 2016 wasn't available 19 MR. RUMANEK: Object to the form and the 19 20 characterization. 20 in 2008. 21 So, sometimes I'd be describing the 21 BY THE WITNESS: progression of a theory or the progression of 22 22 A. No. knowledge as it related, for example, to the 23 23 BY MS. LIU: materials used for midurethral sling. There were 24 24 Q. When you read the literature for

Sarah Abbie Collins, M.D. many that were tried before the Type 1, Amid Type 1 articles? 1 polypropylene meshes. And so we had descriptions 2 2 Sometimes. Α. of what happened with some of those materials and 3 3 Q. But other times you do not? then what happened next and then what happened next 4 A. It depends on the nature of the -- I 5 and then what happened next. mean, there are many studies that are funded by 5 6 Q. So, Doctor, when you saw publications, 6 devices and device companies, but they are 7 peer-reviewed publications, that described 7 completely investigator-managed studies, 8 polypropylene slings causing chronic pain, what 8 investigator-designed studies. So, the company kind of consideration did you give that in doesn't actually have any input on the study design 9 9 10 generating your report? or the conducting of the study. I think that those 10 MR. RUMANEK: Object to the form. are still scientifically legitimate. 11 11 12 BY THE WITNESS: 12 O. So, the studies that would have A. I didn't see any publications that 13 investigator control that you mentioned, you know, 13 of the investigation, if those conflict of 14 convinced me that the mesh caused chronic pain. 14 15 BY MS. LIU: 15 interests were from, say, doctors that were consultants or that had, you know, been preceptors O. But you do agree that there is 16 for a medical device company, would that be 17 literature out there that states that midurethral 17 slings can cause chronic pain, is that correct? considered any kind of, in your mind, would that be 18 18 19 A. Again, I think that it's safe to say 19 considered input from the company? 20 that the surgeries used to implant the slings, some 20 MR. RUMANEK: Object to the form. 21 of those patients that underwent those surgeries 21 BY THE WITNESS: 22 developed chronic pain. I don't think anyone can 22 A. Maybe. But again, you know, there is --23 definitively say that the midurethral sling caused there has to be scientific merit to the study. The 23 24 that pain. data have to be supporting the conclusion that

Page 155

Q. So, now in all of the literature that 1 2 you reviewed that was opposite from you, none of 3 them convinced you of that the polypropylene 4 midurethral sling could cause chronic pain, is that 5 correct? 6 MR. RUMANEK: Object to the form, 7

mischaracterizes testimony.

BY THE WITNESS:

I was not convinced.

10 BY MS. LIU:

> Q. Did you give it any consideration?

12 A. Of course.

> Q. What kind of consideration did you give

it? 14

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15 I mean, I think scientific consideration, you know, what is the scientific merit of the study, do the data produced support 17

the conclusions or not. 18

> Q. And --MR. RUMANEK: Object to form.

21 BY MS. LIU:

And, Doctor, when you give weight to an 23 article, do you consider whether or not there are

24 conflicts of interest in the authors of those Page 157

they're trying to make. And I still think that it would probably be irresponsible to throw out all studies that, you know, are funded through a device 4 company.

5 Q. And you just said maybe. Was this 6 something you thought about at all when you

7 generated your report? 8

MR. RUMANEK: Object to the form. BY THE WITNESS:

A. I mean, I relied on data that I believe 10 to be sound from studies that I believe to be 11

12 well-designed.

BY MS. LIU: 13

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Q. And you believe them to be well-designed. Did you look into whether or not there were conflicts of interest at the time you considered them to be well-thought-of, designed 17 18 studies? MR. RUMANEK: Object to the form.

20 BY THE WITNESS:

21 A. I mean, not past what it would have said on the front page of the -- some of the studies 22 that I read and cited are funded studies. Some of 23 24 them are funded by, you know, NIH and some of them

Page 156

Page 200 Page 198 MR. RUMANEK: Object to the form. I know the density. I don't know the 1 1 weight. If you were to discontinue it from its 2 BY THE WITNESS: 3 A. No. I mean, there is so much clinical 3 trocars and put it on a scale, I don't know how 4 evidence and peer-reviewed evidence to suggest that 4 much it weighs. 5 the pore size is exactly right. If we were 5 O. Do you know what the weight is per, say, 6 concerned about the pore size being too small, then 6 centimeter squared? 7 by definition we would be seeing a lot of infected 7 A. I believe it's 100 grams per centimeter 8 mesh and the truth is we're just not seeing that. 8 squared. Clinically I have not seen it. I don't think I've 9 Q. And do you believe that to be 10 ever been able to definitively say that a Type 1 10 lightweight? 11 polypropylene mesh is infected. 11 No, not lightweight. A. 12 BY MS. LIU: 12 What weight would you consider that to Q. So, what about -- we talked about 13 13 be? 14 shrinkage and contraction. So, with shrinkage and 14 A. I mean, the weight is 100 grams per 15 contraction, would the pore size -- if Ethicon's 15 centimeter cubed. own scientists stated that the pore size was Would you consider -- sorry. Go ahead. 16 insufficient for contraction and shrinkage --17 Would you consider that to be a 17 heavyweight mesh? 18 A. Again, I --18 MR. RUMANEK: Object to the form. 19 Q. Let me finish the question. 19 20 MR. RUMANEK: Let her ask the question. Let 20 BY THE WITNESS: 21 me object. 21 A. I guess. I don't know. I don't really BY MS. LIU: 22 consider it to be a heavyweight mesh. But in the 22 Q. Would that change your opinion? 23 classification system, I suppose. 23 BY MS. LIU: 24 MR. RUMANEK: Object to the form, misstates 24 Page 201 Page 199 the evidence. Do you believe a lighter weight mesh 1 1 2 BY THE WITNESS: 2 would have a better safety profile? 3 MR. RUMANEK: Object to the form. 3 A. No. I think that the evidence is -- is 4 what it is. We don't -- we don't just see those 4 BY THE WITNESS: 5 5 A. I do not. things happening. BY MS. LIU: 6 BY MS. LIU: 6 7 O. And even if Ethicon's own scientist 7 Q. So, even if Ethicon's own internal believe that a lighter weight mesh would have a scientists stated as such, that would not be 8 8 something that you would rely upon in generating 9 better safety profile, you would not consider that 9 your opinion, is that correct? 10 information in your opinions? 10 MR. RUMANEK: Object to the form. MR. RUMANEK: Object to the form, 11 11 12 mischaracterizes the evidence, asked and answered. 12 BY THE WITNESS: BY THE WITNESS: 13 A. I would not. 13 14 A. I guess it's correct, yes. 14 BY MS. LIU: BY MS. LIU: 15 Q. Have you done any -- have you reviewed 15 any of the testing done by Ethicon? Q. Now, would it change your opinion if 16 16 Ethicon's own scientists believe that the Amid 17 A. No. 17 Do you have any opinions as to whether study was outdated? 18 18 or not the TVT mesh frays? 19 MR. RUMANEK: Object to the form. 19 20 BY THE WITNESS: 20 MR. RUMANEK: Object to the form. BY THE WITNESS: 21 21 A. No. A. I do not believe that it frays when used 22 BY MS. LIU: 22 23 appropriately in a clinical setting. Do you know the weight of the TVT mesh 23 24 or TVT Exact mesh? 24 BY MS. LIU:

Page 208 Page 206 1 antioxidant compound as is produced with the TVT, Q. If you had seen such a document, would 1 ves. I believe that it is inert. 2 that change your opinion? 2 3 MR. RUMANEK: She doesn't know because you 3 Q. And how did you form this opinion that 4 4 haven't shown her the document. it was inert? 5 BY MS. LIU: 5 A. Well, you know, mostly my clinical 6 Q. Assuming that what I am telling you is 6 experience tells me that it's inert and, you know, 7 true. If you were to see that document, would that 7 there are -- there is some recent literature from I think it was even December of 2016, the Thames 8 change your opinion? 9 MR. RUMANEK: Object to the form. 9 report shows definitely that it is inert. Q. Now, have you reviewed any internal 10 BY THE WITNESS: 10 documents by Ethicon that found microscopic changes 11 A. I don't know. 11 to the surface of the mesh after it's been 12 BY MS. LIU: 12 Q. Do you know what antioxidants are used implanted? 13 13 14 with the mesh that is weaved into the TVT? 14 MR. RUMANEK: Object to the form. I don't specifically know which ones are 15 BY THE WITNESS: 15 Not Ethicon documents that said that, 16 used. 16 17 Q. And you do agree they use antioxidants, 17 no. BY MS. LIU: correct? 18 18 19 Q. And if you had seen Ethicon documents 19 MR. RUMANEK: Object to the form. 20 BY THE WITNESS: 20 where they've stated they've tested the mesh after 21 implantation and that there are changes to the 21 A. Correct. surface of the mesh, would that change your opinion 22 22 BY MS. LIU: as to whether or not the polypropylene is inert? 23 23 Do you know what the clinical risks of Ο. 24 MR. RUMANEK: Object to the form, these antioxidants are? Page 207 Page 209 MR. RUMANEK: Object to the form. mischaracterizes the evidence. 1 2 BY THE WITNESS: 2 BY THE WITNESS: 3 A. I don't believe there are any risks to 3 A. It would not. 4 BY MS. LIU: 4 the antioxidants used. Q. So, you would not consider any of the 5 5 BY MS. LIU: Q. And why -- how do you say that? tests that Ethicon did during the development and 6 7 along the lines of them selling the TVT, you 7 A. Well, my understanding is that the -there are antioxidants compounded with the mesh 8 wouldn't consider any tests that they did as part 8 of your report? material to prevent oxidation of the mesh in situ 9 9 10 MR. RUMANEK: Object to the form. Are you 10 in vivo and there haven't been any adverse events asking her did she consider it? She said numerous 11 that come from the antioxidant package per se and 11 so -- but since I can't name the specific 12 times if you want to show her a document, she will 12 consider it. Are you asking did she consider it? 13 antioxidants, I can't tell you their profiles 13 14 BY MS. LIU: 14 specifically. Now, in your report your opinion is that 15 Q. No. My question was if -- you had 15 Q. stated that it wouldn't matter if you had seen the polypropylene mesh used to make the TVT or 16 16 these documents, that you would not have considered TVT Exact is inert, is that correct? 17 17 them in your report. 18 MR. RUMANEK: Where are you referring 18 19 So, what I'm just trying to clarify is 19 specifically? that if you had seen tests with results from BY MS. LIU: 20 20 Ethicon that showed that the polypropylene was not 21 21 Q. Just in your report you've -- you've stated in your report, it's your opinion that the inert, would you have considered that in generating 22 22

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your report?

MR. RUMANEK: Object to the form.

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polypropylene mesh is inert, is that correct?

A. Well, the polypropylene mesh with the

	Salali Apple	Com	10, 1 1101
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	BY THE WITNESS: A. I mean I think the Thames paper is irrefutable, and I have that data. So, I'm not sure that there is anything that I could read from an internal document from Ethicon that would change my mind about that. BY MS. LIU: Q. And you also in your report noted the Material Safety Data Sheet, is that correct? A. Yes. Q. And you also noted that based on the Material Safety Data Sheet, you did not feel as though that that had any bearing on your use of the TVT mesh, is that correct? MR. RUMANEK: Object to the form to the extent it mischaracterizes what's in the report. BY THE WITNESS: A. Yes. Did you want to where are you in the report? BY MS. LIU Q. I'm not sure exactly where I am because but A. There is no page number for you?	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Q. And, so, you didn't rely on the MSDS when you formed your opinions, is that correct? MR. RUMANEK: Object to the form. BY THE WITNESS: A. Correct. I just want to clarify that I, when thinking about the material of the TVT, is not a raw polypropylene material. It's actually there is additives to it that make it not the same material. BY MS. LIU: Q. And, Doctor, you don't know what those the added materials are, correct? A. I just know that they are MR. RUMANEK: Object to the form. BY MS. LIU: Q. And, so, you've never tested how these antioxidants affect the mesh, correct? MR. RUMANEK: Object to the form. BY THE WITNESS: A. Correct. I don't see that that's necessary. BY MS. LIU: Q. And you've never seen any of the test
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Q. I wasn't looking at it when I was asking Page 211 you the question. So, I'm not sure. But in your you did reference the MSDS, correct? MR. RUMANEK: If you need to find it, take the time to find it. It's not a memory test. BY MS. LIU: Q. Let's move on. Doctor, have you reviewed the MSDS for the Ethicon's TVT mesh? A. Yes. Q. Okay. And did you consider the MSDS when you drafted your report? MR. RUMANEK: Object to the form. BY THE WITNESS: A. Not really, no. BY MS. LIU: Q. I just found it too. A. Yeah. Q. So, you did not consider the data that was in the MSDS, is that correct? MR. RUMANEK: Object to the form. BY THE WITNESS: A. That's correct. BY MS. LIU:	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	results that Ethicon may or may not have done with Page 213 the antioxidants on the polypropylene mesh for the TVT? MR. RUMANEK: Object to the form. BY THE WITNESS: A. Do you mean their own internal studies? BY MS. LIU: Q. Correct. A. No. Q. And, so, you didn't consider any of that material in generating your report, correct? MR. RUMANEK: Object to the form. BY THE WITNESS: A. Right. BY MS. LIU: Q. Have you seen evidence in the literature that shows that the TVT mesh shrinks or contracts? MR. RUMANEK: Object to the form. BY THE WITNESS: A. I have seen reports about the complex of the mesh and the human tissue into which it's implanted shrinking together a small amount, yes. BY MS. LIU: Q. Did you, when you were researching to draft your report, did you run any PubMed searches

Page 222 Page 224 BY MS. LIU: have that perspective. 1 Q. So, you concluded it was surgeon error? 2 BY MS. LIU: 2 3 Q. So you wouldn't consider yourself to be 3 MR. RUMANEK: Object to the form. 4 a polymer expert, correct? 4 BY THE WITNESS: A. Correct. 5 MR. RUMANEK: Object to the form, 5 6 mischaracterizes her testimony. 6 BY MS. LIU: 7 7 Q. Did you consider that it could have been BY THE WITNESS: 8 8 A. I would say I have an expert level of the TVT? 9 familiarity with the midurethral sling. 9 A. Yes. 10 BY MS. LIU: 10 Q. And what kind of consideration did you From a clinical perspective, correct? 11 give it? 11 Ο. 12 12 A. Well, I gave it I think a scientist's Α. Correct. consideration. This is one piece of the puzzle. 13 O. Not in the design perspective, correct? 13 MR. RUMANEK: Object to the form. 14 And you have to ask questions about feasibility, 14 scientific feasibility, of the mesh causing the BY THE WITNESS: 15 15 problems. Is there a mechanism by which that's 16 A. I think I've said that already. 16 possible? And the answer is no. 17 BY MS. LIU: 17 Is there a likelihood or a body of Q. And, so, that would be a yes? 18 18 MR. RUMANEK: Object to the form. 19 evidence that would support the mesh causing these 19 20 BY THE WITNESS: 20 injuries? And the answer is clearly no. 21 Q. So, in your opinion because you believe 21 A. Yes. that the TVT itself is a tool and cannot cause 22 22 BY MS. LIU: these injuries in these patients, you automatically 23 Now, in the case-specific study or 23 assume that whenever a patient has complications, expert reports that you've provided, have you Page 225 Page 223 it is not due to the TVT mesh, is that correct? 1 concluded that all of them were -- all of the 1 MR. RUMANEK: Object to the form, 2 complications that the Plaintiffs had in those 2 3 mischaracterizes her testimony. 3 cases were not due to the TVT? 4 4 BY THE WITNESS: MR. RUMANEK: Object to the form. 5 5 A. I mean, I think at some point you're BY THE WITNESS: splitting hairs a little bit. You can't -- the 6 A. I think that would be an 6 mesh can't be placed without a surgery and I 7 oversimplification of all of my expert reports. 7 8 8 believe it's the surgery that causes the injury. I think I made this distinction earlier, but I'll make it again, that the TVT is a tool 9 BY MS. LIU: 9 10 Q. Now -similar to a scalpel or a needle or a suture. It's 10 a surgeon's tool. A surgeon can use most tools to 11 MR. RUMANEK: Hold on. Were you finished? 11 hurt somebody. It's not the tool that's causing BY THE WITNESS: 12 12 13 the damage. It's the surgeon. 13 A. No. I was just going to say that the --14 it probably becomes hairsplitting to start to, you BY MS. LIU: 14 know, try to parse out exactly what led to the 15 So, in every case that you have provided 15 problem. By definition you can't have a sling an expert opinion on, you have concluded that it's 16 implanted without a surgery to implant it. 17 not the TVT but it's the surgeon that caused the 17 18 BY MS. LIU: 18 problems? Q. Now, the sling is a medical device that 19 MR. RUMANEK: Object to the form. 19 is permanently implanted in the body, is that 20 20 BY THE WITNESS: 21 A. Insofar as -- I mean, there were really 21 correct? 22 only two of the cases that I reviewed that actually 22 That's correct. Α. 23 had injuries at all and those two injuries were 23 Q. And it's meant to be permanent, correct? 24 caused by surgeons. 24 That's correct.

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	items would be unwanted whether or not there would be a clinical significance, is that correct? MR. RUMANEK: Object to the form, mischaracterizes the testimony. BY THE WITNESS: A. I think it only matters in that there would be clinical significance. So, if there were not any clinical significance to any one of those, then I really wouldn't care about it. BY MS. LIU: Q. But you would still agree that it would be designed not to do any of those things, is that correct? MR. RUMANEK: Object to the form. BY THE WITNESS: A. I think you said that it was not designed to do those things, not that it was designed not to do those things. So, In other words, that wasn't the point of the device. BY MS. LIU: Q. Right. So, regardless of whether or not there is a clinical impact, that wasn't the intention of the device, is that correct? A. Correct.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	other. So they wouldn't know. Q. And you didn't know, is that correct? A. That's correct. MR. RUMANEK: Object to the form. MS. LIU: I'm going to save the rest of my time for rebuttal. Thank you. Let's go off the record. (WHEREUPON, discussion was had off the record.) EXAMINATION BY MR. RUMANEK: Q. Dr. Collins, I have a few follow-up questions. Do you recall being asked by counsel about the mesh folding or curling as a result of going through where the trocars were placed? A. Yes. Q. Do you recall those questions? A. Yes. Q. Are you aware of any clinical studies or clinical data that have attributed any complications or adverse events to the mesh curling as it goes through the place where the trocar was passed?
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Page 295 MR. RUMANEK: Object to the form. BY THE WITNESS: A. The intention of the device was to stop urinary incontinence. BY MS. LIU: Q. And I believe, and I just want to clarify, that in your report you have offered the opinion that the laser-cut mesh and the mechanical-cut mesh are essentially the same clinically, is that correct? MR. RUMANEK: Object to the form. The report speaks for itself. BY THE WITNESS: A. That's correct. BY MS. LIU: Q. Have you ever tracked the complaint rates between the laser-cut mesh and the mechanical-cut mesh? A. No. Q. And how would a physician know whether or not they were implanting a laser-cut or a mechanical-cut mesh? A. I mean, I think that's the point. They're clinically indistinguishable from each	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	MS. LIU: Objection; form. BY THE WITNESS: A. No. BY MR. RUMANEK: Q. Have you had any discussions with colleagues where they have observed any adverse events or complications that they attributed the mesh curling or folding on itself as a result of going through where the trocars passed? MS. LIU: Objection; form. BY THE WITNESS: A. In the retropubic space? BY MR. RUMANEK: Q. Yes. A. No, never. Q. Have you ever seen that in your clinical practice? A. No, never. Q. Do you recall counsel asking you questions about whether or not you had reviewed internal documents, internal Ethicon documents? A. Yes. Q. And do you recall counsel asking you questions about whether you had reviewed deposition

Page 298 Page 300 testimony? 1 MS. LIU: Objection; form. 1 2 2 BY MR. RUMANEK: A. Yes. Q. And would you have reviewed what they 3 3 Q. I believe you testified that you said about the Ethicon employee deposition 4 reviewed, you believe, the general depositions of 5 Dr. Rosenzweig and Dr. Ostergard, is that correct? 5 testimony in their general reports? A. Yes. 6 A. Correct. 6 MS. LIU: Objection; form. 7 7 MS. LIU: Objection; mischaracterizes her 8 BY MR. RUMANEK: 8 testimony. 9 Q. Did anything that was cited in 9 BY MR. RUMANEK: Dr. Rosenzweig's expert report or Dr. Ostergard's Q. Which general Plaintiffs' expert 10 10 depositions did you review? expert report change any of the opinions that you 11 formulated in putting together your expert report? A. Dr. Ostergard and Dr. Rosenzweig. 12 12 Okay. And as part of those general 13 13 A. No. 14 Q. Did anything that you reviewed in their 14 depositions, did they reference internal Ethicon 15 company documents and internal -- deposition 15 expert reports cause you to request any internal testimony of Ethicon employees? 16 documents that they had referenced? 16 17 MS. LIU: Objection; form. 17 A. BY THE WITNESS: 18 Q. Did it cause you to go back and look 18 A. I can't remember. through the materials that you had been provided to 19 19 try to find those internal documents? 20 BY MR. RUMANEK: 20 Q. If their reports referenced internal 21 A. No. 21 22 Q. Did it cause you to go back and request 22 documents or deposition testimony of internal deposition testimony that may have been referenced employees, would you have reviewed that in 23 23 in their reports? preparing your expert report? 24 Page 301 Page 299 MS. LIU: Objection; form. A. No. 1 1 Q. Did it cause you to go back through the 2 BY THE WITNESS: 2 3 materials that had been provided to find deposition 3 A. I wouldn't have. I think I would have 4 considered that biased and not borne out by the 4 testimony that they had referenced? 5 5 evidence in the literature. A. No. BY MR. RUMANEK: 6 Q. Dr. Collins, do you recall counsel 6 7 Q. Would you have reviewed whatever was 7 asking you some questions about the effective 8 porosity of the TVT mesh? 8 included in their report with respect to how they 9 9 cited the Ethicon documents or deposition A. Yes. 10 testimony? 10 Q. And did any of the questions that she asked you about the effective porosity cause you to 11 A. Sure. 11 question any of the opinions that are stated in 12 MS. LIU: Objection. Are you talking 12 deposition or report because I think that's where I your report? 13 13 14 am getting confused. 14 MS. LIU: Objection; form. 15 MR. RUMANEK: Sorry. 15 BY THE WITNESS: A. No. 16 BY MR. RUMANEK: 16 BY MR. RUMANEK: 17 Q. In your review of Dr. Ostergard and 17 18 Dr. Rosenzweig's general reports --Q. Did any of the questions that she asked 18 make you believe that you need to go back and 19 A. General reports. 19 review additional documents or materials in order 20 Q. -- if they referenced in their general 20 21 reports Ethicon company documents, would you have to maintain the opinions that you've stated in your 21 reviewed what they said about those documents in report? 22 22 MS. LIU: Objection; form. 23 their general report? 23 24 BY THE WITNESS: 24 A. Yes.

Page 304 Page 302 offered that testimony? 1 A. No. 2 BY MR. RUMANEK: 2 A. Yes, I'm only aware of -- I'm actually 3 Q. In any of the data and literature that 3 only aware of characterizing mesh according to weight as it pertains to mesh used for pelvic organ 4 you've reviewed during the course of your career in your practice, have you reviewed any medical 5 prolapse and the very lightweight meshes with literature that questioned the safety and 6 increased pore size are markedly different than the 6 7 TVT mesh. 7 effectiveness of the TVT sling based on its pore 8 size? 8 Q. Okay. Are you aware of any -- do you 9 9 have an opinion as to whether or not TVT -- the MS. LIU: Objection; form. 10 mesh used in TVT is lightweight as it compares to BY THE WITNESS: 10 other midurethral slings? 11 11 A. No. MS. LIU: Objection; form. BY MR. RUMANEK: 12 12 13 BY THE WITNESS: 13 Q. Have you reviewed any medical literature or data that attributed any complications or 14 A. I know that it has a relatively low weight compared to other midurethral sling mesh. I adverse events to an inadequate pore size of the 15 think I might have been confused about if you were 16 TVT? to use those meshes then for pelvic organ prolapse. 17 17 A. No. I think that they would be considered heavier Dr. Collins, you were asked a number of 18 18 compared to the lightweight meshes that are used questions about what Ethicon knew or what Ethicon 19 scientists knew. Do you recall counsel asking you 20 for prolapse. BY MR. RUMANEK: 21 21 those questions? A. Yes. 22 Q. And are you aware of any data that 22 suggest that using the lighter-weight prolapse 23 23 Ο. Did counsel show you any of the meshes would be safer or more effective for use in 24 documents that she was purporting to reference in Page 305 Page 303 a midurethral sling than the TVT mesh? her questioning? 1 MS. LIU: Objection; form. 2 2 A. No. 3 3 BY THE WITNESS: Q. If counsel had showed you those documents, is that something that you would have A. No, I don't know of any evidence that 4 4 considered relative to the opinions that are set 5 that's the case. I'd be surprised if it were. 5 BY MR. RUMANEK: 6 forth in your report? 6 7 MS. LIU: Objection; form. 7 Q. And did you see any evidence in the or 8 data in the expert reports of Dr. Rosenzweig or 8 BY THE WITNESS: 9 Dr. Ostergard that you can recall on that issue? 9 A. It's hard to say. MS. LIU: Objection; form. 10 BY MR. RUMANEK: 10 Q. Would you have reviewed those to see if 11 BY THE WITNESS: 11 they impacted your opinions? 12 12 A. No. 13 A. Yes, I would have reviewed them. 13 BY MR. RUMANEK: Q. I believe counsel asked you about Q. What information would you want --14 14 strike that. whether or not the mesh used in the TVT device, 15 15 whether you would characterize that as heavyweight Counsel asked you some questions about 16 or lightweight mesh. Do you recall those whether certain complications could be associated 17 17 questions? with implanting a TVT mesh. Do you recall those 18 18 19 A. I do. 19 questions? Q. Are you aware -- strike that. 20 20 A. Yes. I believe you may have mentioned that it Q. And she asked about chronic pain, 21 21 could be characterized as heavyweight mesh? 22 lifelong dyspareunia, voiding dysfunction, those 22 23 A. Correct. 23 questions. Do you recall those? 24 Can you explain what you meant when you 24 A. Yes. Q.

Page 306 Page 308 O. The complications that counsel mentioned A. Yes. 1 1 2 as being potentially related to a TVT, are those 2 BY MR. RUMANEK: 3 also complications that are potentially associated 3 Q. And do you have any opinions as to how 4 with doing a Burch procedure? 4 the safety of midurethral slings as it relates to 5 MS. LIU: Objection; form. 5 those complications compares with alternative procedures? 6 BY THE WITNESS: 6 MS. LIU: Objection; form. 7 7 A. Yes. 8 8 BY MR. RUMANEK: BY THE WITNESS: 9 9 A. I believe that the safety profile of the Q. Are they associated with the TVT midurethral sling is better than both the Burch 10 non-synthetic mesh slings that counsel asked you 10 and the pubovaginal sling with respect to all of 11 about? 11 12 MS. LIU: Objection; form. 12 those complications. 13 BY THE WITNESS: 13 BY MR. RUMANEK: 14 Pubovaginal slings? 14 Q. And what is the basis for that opinion? BY MR. RUMANEK: 15 A. Well, there have been trials testing 15 this. We have the Ward-Hilton trial. We have --Yes. 16 Q. 17 17 we know baseline rates of all of these Yes. A. complications from large trials like TOMUS, SISTEr, 18 Are you aware of any surgical procedure 18 that even if they weren't compared head-to-head, we 19 to treat stress urinary incontinence that wouldn't 19 carry a risk of potential chronic pain or 20 have numbers of women who experience these 20 complications. And I think every time you look at dyspareunia or voiding dysfunction? 21 21 it you will see that TVT is safer. MS. LIU: Objection; form. 22 22 BY THE WITNESS: Q. And you've reviewed Dr. Rosenzweig's 23 23 general report as well as Dr. Ostergard's general 24 I can't think of one. 24 Page 309 Page 307 1 BY MR. RUMANEK: 1 reports. Do you recall those reports talking about 2 Q. Dr. Collins, have you reviewed the 2 potential cytotoxicity associated with 3 medical literature and data as it relates to the 3 polypropylene used in the TVT and TVT Exact? 4 4 complications that counsel asked you about? A. Yes. 5 5 And based on your review of the data in the medical literature have you found any evidence 6 With respect to pain, have you reviewed 6 Q. that there are any adverse events or complications 7 medical literature that discusses complication 7 8 rates associated with pain? 8 reported in the literature related to cytotoxicity? 9 MS. LIU: Objection; form. 9 A. Yes. BY THE WITNESS: 10 10 And TVT -- and midurethral slings? Q. A. I have not. Sorry. I have not. 11 Α. Yes. 11 12 Have you reviewed medical literature 12 BY MR. RUMANEK: Q. Counsel asked you a number of questions 13 that discusses complication rates of dyspareunia 13 about whether you are an expert in chemistry, following midurethral slings? 14 14 whether you're an expert in chemical engineering, 15 A. Yes. 15 whether you're an expert in design of medical Q. Have you reviewed medical literature 16 16 devices. 17 that discusses complication rates of voiding 17 18 dysfunction after midurethral slings? 18 Do you remember that series of questions 19 A. Yes. 19 where she asked you whether you're an expert in a Have you read medical literature that 20 certain field? 20

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Dr. Collins, do you have expertise as it

relates to the opinions that you've given in your

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A.

report?

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midurethral slings?

24 BY THE WITNESS:

MS. LIU: Objection; form.

discusses other known complications associated with

Page 310 Page 312 MS. LIU: Objection; form. I did discuss that briefly. 1 1 2 2 BY THE WITNESS: Q. And do you believe that those opinions 3 require you to have written an IFU in order to A. Yes. 3 4 offer the opinions that you've given? BY MR. RUMANEK: 5 Q. And to the extent that any of the 5 MS. LIU: Objection; form. opinions that you've given in your report could be BY THE WITNESS: 6 6 7 7 characterized as relating to chemistry or chemical A. Absolutely not. 8 8 engineering or polymers, do you believe that you BY MR. RUMANEK: 9 9 have expertise in order to offer those opinions? Q. Dr. Collins, with respect to the IFUs for the TVT and the TVT Exact device, who is the 10 MS. LIU: Objection; form. 10 BY THE WITNESS: 11 audience -- I think you mentioned in your response 11 to a question from opposing counsel about who the 12 A. I do. 12 IFU is written for -- who is the audience, the 13 BY MR. RUMANEK: 14 intended audience of an IFU? 14 O. And what would be the basis for your 15 expertise in those areas? 15 A. I believe the surgeons implanting the A. Clinical experience, familiarity with 16 device are the audience. 16 Q. And I'm just going to read from the IFU, 17 the data, basic science training for a long time. 17 Q. And have you in your practice evaluated a section from the IFU. 18 18 It says, "It is not a comprehensive 19 and considered different mesh devices? 19 20 20 reference to surgical technique for correcting A. Yes. stress urinary incontinence. The device should 21 MS. LIU: Objection; form. 22 BY MR. RUMANEK: 22 only be used by physicians trained in the surgical treatment of stress urinary incontinence and Q. Have you considered the way different 23 23 mesh devices are designed? specifically implanting the TVT device. These 24 Page 311 Page 313 1 instructions are recommended for general use of the 1 A. Yes. 2 Q. Have you considered the way that how 2 device. Variations in use may occur in specific 3 3 procedures due to individual technique and patient those mesh devices are designed may impact your 4 patients in your clinical outcomes? 4 anatomy." 5 MS. LIU: Objection; form. 5 Do you recall reviewing that language in BY THE WITNESS: 6 the IFU for the TVT? 6 7 A. Yes. 7 A. Yes. BY MR. RUMANEK: Q. And is that consistent with the audience 8 8 9 that you understand the IFU to be written to? 9 Q. Do you believe that you have expertise in order to offer opinions about the design of the 10 MS. LIU: Objection; form. 10 BY THE WITNESS: TVT and TVT Exact as it relates to your clinical 11 11 practice, the medical literature and the outcomes 12 A. Yes. 12 that you've observed? 13 BY MR. RUMANEK: 13 14 MS. LIU: Objection; form. 14 Q. What does it mean for a -- what is your BY THE WITNESS: 15 understanding of the meaning where it says that the 15 device should only be used by physicians trained in A. Yes. 16 16 the surgical treatment of stress urinary 17 17 BY MR. RUMANEK: incontinence and specifically implanting the TVT O. Counsel also asked you whether you had 18 18 19 device? 19 been involved in writing IFUs. Do you recall those 20 questions? 20 A. My understanding of that is that there 21 should be a baseline familiarity with the anatomy 21 A. I do. of continence, female pelvic anatomy, experience 22 Have you offered opinions related to the 22 communication of risk information in your expert with other procedures to correct stress urinary 23 23 24 incontinence, and then there should be specific 24 report?

Page 322 Page 324 Q. Have any medical device manufacturers at the end about, you know, whether or not a doctor 1 ever sent you compilations of e-mails or internal who relied solely on the IFU would be within the 2 2 standard of care? Do you remember that documents to review and consider in their products? 3 3 4 questioning? 4 A. No. 5 A. Um-hmm. 5 Counsel asked you -- opposing counsel asked you some questions about whether or not you 6 Q. Doctor, where are you licensed to 6 were familiar with specific regulations for what 7 practice? 7 8 Illinois and Indiana. 8 was included -- what was needed for an IFU. Do you A. recall those questions? 9 Q. Anywhere else? 9 I have had licenses in other states but A. Um-hmm. 10 A. 10 they're not current now. 11 Q. Dr. Collins, do you have expertise as it 11 12 relates to what is needed to be included within an 12 What other states have you had licenses Q. IFU from a physician's perspective? 13 for? 13 MS. LIU: Objection; form. 14 14 A. Connecticut, New York and then I had a BY THE WITNESS: 15 training certificate for Ohio and I think I had a 15 training certificate for New Hampshire too for --16 A. Sure. 16 BY MR. RUMANEK: 17 Q. What is a training certificate? 17 A. That just means that you don't have a 18 Q. And what is the basis for that opinion? 18 A. I am a surgeon that implants TVT and 19 full license to independently practice. It's meant 19 there are very few things that I need from an IFU, for people that are residents or fellows who are 20 and I think that most well-trained surgeons are the 21 not practicing independently. 21 22 Q. Doctor, are you offering an opinion on 22 same in that respect. Q. And putting aside whether or not 23 the standard of care as it relates to all surgeons 23 24 something is within the, quote-unquote, "standard 24 that implant TVT? Page 323 of care," are you aware of any physicians who have MR. RUMANEK: Object to the form; overbroad, 1 1 relied solely on an IFU in order to understand how 2 non-specific. 2 3 BY THE WITNESS: 3 to implant the TVT or TVT Exact or the 4 A. Yes. 4 complications or potential risks associated with 5 5 that procedure? BY MS. LIU: 6 A. No. 6 Q. So, you believe that you are able to 7 MS. LIU: Objection; form, asked and answered. 7 offer standard of care opinions on all surgeons for TVT regardless of where they're practicing, is that 8 BY MR. RUMANEK: 8 9 Q. And have you ever had any discussions 9 correct? with colleagues who have indicated to you that they 10 10 A. Yes. relied solely on the IFU in order to understand how MS. LIU: I believe that's all the questions 11 11 to perform a surgical procedure or to learn about 12 12 that I have right now. the complications associated with the surgical 13 MR. RUMANEK: I have got just a few follow-up 13 14 questions. 14 procedure? FURTHER EXAMINATION 15 A. No. 15 16 MS. LIU: Objection; form. 16 BY MR. RUMANEK: 17 BY MR. RUMANEK: Q. Dr. Collins, are you aware of any 17 18 physicians who rely as part of their practice on Q. Dr. Collins, are you aware of any IFUs 18 that are provided with respect to surgeons 19 19 internal company e-mails with respect to making 20 decisions about which products they're going to 20 performing a Burch procedure? MS. LIU: Objection; form. 21 21 employ? 22 BY THE WITNESS: 22 A. No. 23 23 MS. LIU: Objection; form, speculation. A. No. BY MR. RUMANEK: BY MR. RUMANEK: 24 24

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	FURTHER EXAMINATION BY MS. LIU: Q. Doctor, you reviewed the 2015 IFU, is that correct? A. That's correct. Q. And you testified that you reviewed one other IFU but you don't remember the year, is that correct? A. That's correct. Q. And you believe the 2015 IFU is sufficient, is that correct? A. That's correct. Q. Do you believe that the IFUs prior to the 2015 is sufficient? A. I do. Q. Do you remember reading them? A. I do. Q. Which ones? A. Well, I told you I read one other I remember reading that one. Like I said, I don't know which one it was. Q. And you don't remember when it came out? A. Right. I know it was not the latest iteration.	1 I, CORINNE T. MARUT, C.S.R. No. 84-1968, 2 Registered Professional Reporter and Certified Shorthand Reporter, do hereby certify: 3 That previous to the commencement of the examination of the witness, the witness was duly sworn to testify the whole truth concerning the matters herein; 5 That the foregoing deposition transcript was reported stenographically by me, was thereafter reduced to typewriting under my personal direction and constitutes a true record of the testimony given and the proceedings had; That the said deposition was taken before me at the time and place specified; That the reading and signing by the witness of the deposition transcript was agreed upon as stated herein; 10 That I am not a relative or employee or attorney or counsel, nor a relative or employee of such attorney or counsel for any of the parties hereto, nor interested directly or indirectly in 12 the outcome of this action. It was requested before completion of 13 the deposition that the witness, SARAH ABBIE COLLINS, M.D., have the opportunity to read and sign the deposition transcript. 16 CORINNE T. MARUT, Certified Reporter (The foregoing certification of this transcript does not apply to any reproduction of the same by any means, unless under the direct control and/or supervision of the certifying reporter.)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Q. Did you read the one that was from 2000? A. I don't know. Q. Or 2002? A. Like I said, I don't know the year. Q. Okay. So, would you be able to confidently testify that each and every iteration of the IFU was sufficient if you haven't read them all? A. I can tell you the ones I've read are certainly sufficient. Q. And you definitively know 2015 but you don't know the other one, correct? A. Correct. MS. LIU: That's it. No further questions. THE REPORTER: Signature? MR. RUMANEK: We'll at least reserve the right for her to read and sign. (Time Noted: 3:49 p.m.) FURTHER DEPONENT SAITH NAUGHT.	Page 333 INSTRUCTIONS TO WITNESS Please read your deposition over carefully and make any necessary corrections. You should state the reason in the appropriate space on the errata sheet for any corrections that are made. After doing so, please sign the errata sheet and date it. You are signing same subject to the changes you have noted on the errata sheet, which will be attached to your deposition. It is imperative that you return the original errata sheet to the deposing attorney within thirty (30) days of receipt of the deposition transcript by you. If you fail to do so, the deposition transcript may be deemed to be accurate and may be used in court.